Commission (CPUC) regarding competition among cellular carriers and cellular service resellers.

I. Summary and Conclusions

5. The Commission should rely on competitively determined market outcomes to the greatest extent possible. Although the Commission must establish a per-call compensation system to overcome the effects of judicial and legislative intervention into otherwise competitive payphone markets, this outcome can be accomplished by establishing a system that reflects market results as accurately as possible.

6. One possible (but not recommended) approach is to use the competitively determined local coin price, but still take account of cost differences, by using an avoided cost approach. That is, the competitively determined prevailing local coin rate of $0.35 would be used as the benchmark, and the avoided cost between local coin calls and dial-around calls and subscriber 800 calls would be subtracted from the $0.35 to determine the dial-around rate and 800 rate. For reasons explained in greater detail below, I do not believe that this approach would be economically efficient or consistent with competitive deployment of payphones. To the contrary, the avoided cost approach will produce below-market rates that will artificially depress the number of payphones available for public use to levels that are lower than competition normally would establish.

7. Nonetheless, I have performed an avoided cost analysis and I estimate that the avoided cost would be approximately $0.04 per call, although for many PSPs the avoided cost is $0.03 or less. Thus, the Commission would take, at a maximum, the difference $0.35 - $0.04 = $0.31 as the proxy rate for subscriber 800 and dial-around calls. This estimate does not include, however, an estimate of additional costs imposed in connection with access code and subscriber 800 calls, such as the cost of paying for identification of those calls as payphone calls through ANI ii digits or other means. To be economically correct, an avoided cost methodology must include the cost of providing this identification. If ANI ii digits are required, the cost is as much as $0.08 per call. Thus, an economically correct net avoided cost calculation would lead to a proxy rate of the local coin rate plus as much as $0.04 per call (i.e. local coin rate minus $0.04 plus $0.08). Using the competitive local coin rate of $0.35 thus would lead to a per call compensation rate of $0.39 per call. Commercial negotiation between the parties would still be allowed after this proxy rate is established, and carriers would have the ability to negotiate for lower rates by their ability to block or reject calls.

8. There is, however, a more efficient pricing mechanism. In an industry in which a significant proportion of costs are fixed and common, the competitive firm takes account of its demand conditions and competitive conditions as well as its cost

to set its price. The firm takes its marginal cost of production for a given product or service, and sets its price as a markup over marginal cost to recover its fixed and common costs. The amount of the markup that the firm will use depends on demand conditions and competitive conditions in the market.

9. The local coin rate of $0.35 reflects competitive conditions currently, as the Commission previously found. Applying the competitive markup formula, a competitive firm facing the demand conditions present for payphone services would markup the marginal costs about 1.67 times as high for dial-around and subscriber 800 service as for local coin call service based on the different demand elasticities which I estimate. This outcome arises from the economic fact that dial-around and subscriber 800 service is a derived demand with a relatively low proportion of the overall price of a long distance call from a payphone. When demand conditions are considered as would occur in a competitive industry, no reason exists to claim that the dial-around and subscriber 800 price should be less than the local coin call price even if one assumes (contrary to fact) that the cost of dial-around and subscriber 800 calls is less than the cost of local coin calls. Taking demand conditions into account, I have estimated that the market, if free from regulation, would price dial-around and subscriber 800 call on average at $0.42 to $0.43, a rate that exceeds the range of $0.31-$0.39 per call that arise from the avoided cost calculations.

10. If regulation does not account for demand conditions but instead sets the dial-around price at or below the local coin call price based solely on cost considerations, an efficient supply of payphones will not result. Some marginal payphones will not be supplied because of regulation holding down the price below competitive levels, and thus some demand for payphones will not be satisfied which otherwise would have been satisfied under competitive conditions. This decrease in output will create a significant loss in economic efficiency and reduce total social welfare. It would lead to precisely opposite the result that Congress intended when it required the Commission to "promote widespread deployment of payphone services to the benefit of the general public."

11. The record of this proceeding indicates that some participants previously suggested that prices should be based on average costs. This would not be an economically correct approach. If the Commission were to follow an average cost approach, it would be inconsistent with competitive outcomes and would lead to consumer harm. For example, AT&T previously recommended an approach that would disregard demand differences and would use average costs. Many payphones would be removed, creating a great increase in consumer inconvenience in not being able to place local coin and long distance calls. At my request, Arthur Andersen has performed a calculation of the number of payphones that are at risk of removal. Even at $0.35 per call,

more than 20 percent of payphones are at risk of removal, and thousands more will be removed for each $0.01 the Commission takes out of the per-call rate.

II. An Avoided Cost Approach Uses a Competition-Based Outcome to Set Rates

12. The Commission should rely on competitively determined market outcomes to the greatest extent possible. Market outcomes incorporate demand and cost conditions and typically lead to the best outcomes for consumers.

13. One method of incorporating competitive outcomes is to rely on the competitively determined local coin price, but still take account of cost differences (while neglecting demand differences), by using an avoided cost approach.[1] That is, the competitively determined rate for local coin calls would be used as the benchmark, and the avoided cost between local coin calls and dial-around and subscriber 800 calls would be subtracted from (and any additional cost would be added to) the local rate to determine the dial-around and subscriber 800 rate.

14. However, avoided cost approaches make the implicit assumption that -- and thus are appropriate for use where -- the two competing services will be very close substitutes. By taking account of avoided costs, these approaches ensure that the more

[1] This approach was adopted by the CPUC in the cellular proceeding for appropriate charges to cellular resellers.

efficient provider with the lower costs will supply most of the service.[2] In the current situation, dial-around and subscriber 800 calls are not close substitutes to local coin calls. As a result, using an avoided-cost model is not economically appropriate. In fact, as explained in greater detail below, because the avoided cost approach ignores demand differences, it will lead to a less efficient outcome than when demand difference are included in the analysis.

15. Using estimates of differences in incremental cost from Arthur Andersen--including coin counting, handling, and collections costs as well as, where applicable, local usage charges--I find that the avoided cost would be, on average, approximately $0.04 per call. Thus, the greatest offset the Commission would use is $0.04, and the difference between the deregulated local rate, generally $0.35, yields the calculation $0.35 - $0.04 = $0.31 as the proxy rate for dial-around calls. Of course, commercial negotiation between the parties would still be allowed after this proxy rate is established.

16. However, an additional cost arises if PSPs are required to pay for the delivery of ANI ii coding digits, or other

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[2] This assumption underlies the resale provisions of the Telecommunications Act of 1996 and the CPUC decision on cellular resale. The CLEC's resold service will be very close substitutes to the ILECs' services; similarly, the cellular resellers' services were very close substitutes to the cellular carriers' services.

payphone identification information, to be eligible for per-call compensation. Arthur Andersen estimates that, if ANI ii digits must be used, this additional cost will be as much as $0.08 per call.[3] This additional cost must be added in to estimate the net avoided cost. The net avoided cost estimate of the price of dial-around and subscriber 800 calls would be the local coin rate plus $0.04 (-$0.04 avoided cost + $0.08 ANI related cost), which at today's prevailing competitive coin price would be $0.39 per call.

17. The claim made by several interexchange carriers that coin mechanism costs are an avoidable cost is incorrect from an economic standpoint. The ability to place local coin calls is a necessary attribute of most payphones to make them sufficiently profitable so that they are used in the competitive market. Consequently, the coin mechanism is a common cost; without it, there would be no phone and neither local coin nor subscriber 800 nor access code calls would be made. The cost of the coin mechanism is not "avoided" simply because the user does not take advantage of it; it is still there, and the expense of providing it must be incurred, even when a particular user makes an access call or subscriber 800 call.

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[3] Andersen estimates that if companies are allowed to use database services like OLNS, rather than ANI ii coding digits, to provide this information, the additional cost drops to about $0.01 per call.

III. <u>Competitive Pricing Would Lead to Per-Call Compensation
Rates Exceeding Local Coin Call Charges</u>

18.   One of the primary goals of the Telecommunications Act
is to have payphone charges reflect competitive pricing. While
historically regulation of telecommunications has been based on a
cost based model (e.g. rate of return regulation), prices in
competitive markets depend on 3 factors: (1) demand conditions,
(2) cost conditions, and (3) competitive conditions. Only in the
extreme case of perfect competition (with constant returns to
scale) are prices established solely by cost conditions in a
competitive market.

   A.   <u>Competition in Payphone Services Lead to a Markup of
Price Over Marginal Cost</u>

19.   Economists have long recognized that some markets (like
telecommunications markets) are characterized by a high
proportion of fixed and common costs in relation to total cost.
In these markets, the marginal cost of a good will often be less
than the total cost divided by output (often used as a measure of
average cost).   To allow regulated companies to recover these
fixed and common costs, regulators have often resorted to
arbitrary allocations of the fixed and common costs.

20.   However, in a competitive industry with significant
fixed and common costs (a good example is the airline industry),
the firm takes account of its demand conditions and competitive
conditions as well as its costs to set its price. The firm takes

its marginal cost of production for a given product or service, and sets its price as a markup over marginal cost.[4] The amount of the markup that the firm will use depends on demand conditions and competitive conditions in the market. For example, in the airline industry the markup on first class and business class seats is significantly greater than the markup on coach seats. The markup is used to recover the fixed costs of the plane plus the common cost of the reservation system and computer systems.

21. In particular, the markup that a competitive firm uses depends on the inverse of the price elasticity. The more elastic the demand for the service is, the smaller the markup over marginal cost will be. The deregulated local coin rate reflects competitive conditions currently, as the Commission previously found. Arguing that the marginal costs of dial-around and subscriber 800 calls are less than for local coin calls, some submissions undoubtedly will claim that the dial-around and subscriber 800 rate should be less than the local coin rate. However, this argument is incorrect since only costs are considered. In a competitive situation where a significant portion of total costs are fixed and common, demand conditions must be taken into account as well. Since the provision of payphone services has a high proportion of fixed and common

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[4] Of course, the markup has to be sufficiently large so that the firm can cover its total costs given the quantity sold at the competitive price. Otherwise the firm will exit the business. See e.g. P.A. Samuelson and W.D. Nordhaus, Economics, 12th edition, 1986.

costs, the fixed and common costs of the payphone have to be covered or a payphone will not be provided in a given location. Thus, a markup over marginal cost is required for a competitive supply of payphones.

22. The use of efficient pricing which takes account demand conditions in payphone call pricing is not simply a matter of economic theory, but one of economic fact. Where the payphone market functions without regulatory intervention, as is the case with 0+ calls, it already incorporates demand elasticities into pricing. 0+ calls have cost attributes identical to access code and subscriber 800 calls, as 0+ calls do not impose coin collection or local usage charges on PSPs. The market, however, does not price payphone compensation for these calls at less than the local coin rate. To the contrary, the market prices compensation far higher--sometimes at three times the local coin rate or more. This market outcome provides an empirical demonstration that in a competitive market, compensation for subscriber 800 and access code calls would not be priced lower than local coin calls even if one were to assume that subscriber 800 and access code calls cost PSPs less to originate. To the contrary, because the costs of originating 0+, access code, and subscriber 800 calls are all similar, it demonstrates that the

market would price subscriber 800 calls and access code calls higher than local coin calls.[5]

23. To estimate the elasticity for local coin calls I used data from U S WEST. When U S WEST increased the price of local coin calls from $0.25 to $0.35 in Iowa (1987), Nebraska (1993), North Dakota (1994) and Wyoming (1991), the demand for local coin calls decreased immediately by about 20%. Calculating the arc elasticity I find the local coin rate elasticity to be about -0.663.

24. To calculate the elasticity for dial-around service, I take the interstate long distance elasticity of -0.723 and multiply it by the share of the price that the dial-around component represents.[6] This calculation leads to the "derived demand" elasticity for dial-around service. No consumer demands dial-around service by itself; the consumer only uses dial-around service in the context of making a long distance call. I use an estimate from Arthur Andersen based on AT&T data that the average

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[5] The demand elasticities for 0+ and access code calls should be very similar since the calls are extremely similar in functionality and price.

[6] This elasticity is from Gatto et. al. (1988) and from Taylor and Taylor (1993). Since my research has demonstrated that intrastate interLATA calls and intraLATA calls have smaller elasticity than interstate calls, this estimated elasticity may be somewhat too high. Adjusting the elasticity downward, however, would only increase the resulting price for dial-around and subscriber 800 calls, as price is inversely related to elasticity.

price of a dial-around long distance call is $2.16 so that $0.35 is about 0.162 of the total price of the call.[7] Multiplying this factor by the long distance price elasticity gives a derived demand elasticity of approximately -0.117.[8] Thus, the derived demand elasticity estimate for dial-around service is about 1/5 as large as the demand elasticity for local coin calls (e.g. - .117/-.663 = .176).

25. Now applying the competitive markup formula, a competitive firm would mark up the marginal costs 5.67 times as high for dial-around service as for local coin call service. This outcome arises from the economic fact that dial-around service is a derived demand with a relatively low proportion of the overall price of a long distance call from a payphone. Thus, even if the specific elasticities estimates or long distance prices were to change somewhat, the conclusion that dial-around service would not be priced below the local coin call price would continue to hold.

26. I now do a similar calculation for subscriber 800 calls. In previous research I have used an instrumental variable

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[7] This estimate includes calling card and collect calls averaged over daytime, evening, and night/weekend rates.

[8] This estimate is consistent with market experience. U S WEST reports it found no significant price sensitivity for access code call demand when a $0.35 set use fee was imposed in Iowa in 1987. Nor did U S WEST encounter significant changes in demand when set use fees were imposed in Nebraska (1993) and North Dakota (1994).

technique to estimate the price elasticity for 800 demand. I
estimated an elasticity of -0.77. To calculate the derived
demand elasticity, I use the average price of an subscriber 800
call of $0.50, and I take the ratio of $0.35/0.50 = 0.70.
Multiplying this ratio by the elasticity estimate results in a
derived demand elasticity of -.539. Applying the competitive
markup formula, the percentage markup for subscriber 800 calls
would be 1.23 times higher than the percentage markup for coin
calls.

27. Now to calculate a blended rate for dial around calls
and subscriber 800 calls, I use the proportions of 1/3 dial
around calls and 2/3 subscriber 800 calls to calculated the
weighted average elasticity of -0.398 [.333*(-0.117) + .667*(-0.539) = -0.398]. Thus, the markup over marginal cost would be
1.67 times as large for dial-around and subscriber 800 calls as
for local coin calls.

28. To determine the competitive price for dial-around and
subscriber 800 calls, I have also used the 0+ information that I
discussed above. Using the estimated elasticities for long
distance calls and 800 calls and the derived demand elasticities
together with the fact that the marginal costs are similar for
all of these types of calls, leads to an estimate that the
competitive price for dial around calls and subscriber 800 calls

would be $0.42 per call.[9] The calculation assumes that the marginal costs are similar, that the demand elasticities for 0+ and dial-around calls are similar, and that approximately 1/3 of calls are dial-around calls and 2/3 are subscriber 800 calls. Thus, once demand conditions are considered -- as would occur in a competitive industry -- no reason exists to claim that the per-call compensation rate should be less than the local coin call price. To the contrary, as the calculation based on 0+ calls demonstrates, dial-around and subscriber 800 calls would have a higher competitive price than local coin calls.

29. While marginal costs are extremely difficult to estimate, I have attempted to approximate them with respect to each type of call so as to be able to calculate competitive mark-ups based on marginal costs. Now the approximate marginal cost of a local coin call, estimated by Arthur Andersen, is $0.04 per call. The appropriate marginal cost for dial-around and subscriber 800 calls to the PSP is at least $0.05 per call. This is a conservative estimate, as it includes a very conservative estimate of ANI ii costs, excludes commission costs, and excludes otherwise properly included opportunity costs (those that arise from the chance that a potential caller will not make a local coin call or other type of revenue-generating call because the

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[9] To the extent that IXCs argue that dial-around calls benefit from advertising compared to 0+ calls, note that advertising is not a marginal cost, and that 0+ calls are affected by advertising, since a consumer may choose to use dial around if he believes he can achieve a lower call price.

phone is occupied with, or can be used to make, a dial-around or subscriber 800 call). Based on these estimates, I calculate that dial-around and subscriber 800 calls would have a minimum price of $0.43 (which is very close to the $0.42 estimate derived using 0+ rates in the preceding paragraph), and could be priced as high $0.72 per call; this is from $0.08 to $0.37 more than the prevailing local coin rate. Once again, when demand conditions are considered as well as marginal cost as would occur in a competitive industry, no reason exists to claim that the per call compensation rate should be less than the local coin call price.

B. Economic Efficiency Considerations

30. Note that the outcome in which prices are set according to the economic analysis that I discussed will lead to an economically efficient solution with respect to what economists call a "second best outcome". A "first best outcome" would set prices equal to marginal cost, but this outcome is economically impossible unless payphone providers received a subsidy to cover fixed and common costs which will not occur and which Congress has specifically forbidden. The "second best" outcome occurs when a multi-product (or service) industry must cover the fixed and common costs without subsidy. To the extent that the payphone industry is competitive, the pricing outcome that I have

discussed will lead to a second best outcome with an efficient supply of payphones in given locations.[10]

31. Now it is unlikely that the price elasticities or price ratios will be identical across all payphone locations. Thus, the economic outcome can improve through negotiation between the payphone provider and a given interexchange carrier (IXC). Thus, I recommend to the Commission that it allow negotiation among the economic parties to set a mutually agreeable per call compensation rate. Nevertheless, the agreed upon dial-around price and subscriber 800 price is likely to be higher than the local coin call price because of the difference in demand conditions between the different types of calls.

32. If regulation does not account for demand conditions but instead sets the dial-around and subscriber 800 prices at or below the local coin call price based solely on cost considerations, an efficient supply of payphones will not result. Some marginal payphones will not be supplied because of regulation holding down the price below competitive levels, and thus some demand for payphones will not be satisfied which otherwise would have been satisfied under competitive conditions. This decrease in output will create a significant loss in

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[10] By a second best supply of payphones, I mean that payphones will be located wherever they can cover their total costs in a given location. It will not be a second best outcome in the public finance usage since no pure profit taxation is available.

efficiency to the U.S. economy since quantity changes of this type create first order losses to the economy.[11]

C.   The Efficient Ramsey Pricing Solution

33. Another way to consider the problem is what would an "all knowledgeable" social planner do to maximize economic efficiency? This outcome cannot actually occur because the hypothetical social planner could never gather all the required information to make the necessary calculations. The outcome of this analysis is often called the "Ramsey pricing solution" after the English economist who first solved the problem in an optimal tax context. The Ramsey solution is to set price in excess of marginal cost differentially across services so that the percentage change in the demand of each service from the first best solution is equal.[12]

34. To achieve the efficient Ramsey pricing solution, demand conditions must be taken into account since the percentage change in the demand for each service as prices change depends on the demand elasticities for each service. To the extent that the

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[11] The efficiency loss to the economy here is $dq*(p - mc)$ where dq is the reduction in demand, p is price, and mc is marginal cost. The other effect of improper price regulation here is a transfer to inframarginal demand which has no economic efficiency effects.

[12] This explication of the Ramsey solution allows for cross price effects as well as own price effects. Cross price effects could well exist for payphones because of substitution between coin calls and credit card calls.

social planner only had control over payphone prices, and not long distance prices, the social planner will end with the dial-around and 800 originating prices exceeding the local coin call price because of the differential price elasticities that I discussed in the above section. The main difference that could arise is that the "all knowing" social planner might have the level of prices higher or lower depending on the relative consumer's value of inframarginal and marginal payphones at a given price level. Nevertheless, the relative prices would still be similar to the competitive situation that I described above. Since Congress has determined that the supply of payphones will be determined by a competitive outcome without subsidies being used, the general features of the efficient Ramsey pricing solution will arise in the competitive outcome with the number and location of payphones being determined by the competitive market outcome.

35. As a rough estimate of the Ramsey outcome, I have asked Arthur Andersen to calculate the price that would be imposed for the use of payphones across all calls if a single ad valorem tax rate were used.[13] This approach estimates the amount that would be paid for dial-around and subscriber 800 calls if the Commission were simply to impose a "tax" on all payphone calls to cover joint and common costs, which make up most of all payphone

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[13] This approach has been used by the CPUC, and other Commissions, to fund low income user programs.

costs. Andersen calculates that, if such an ad valorem tax were imposed, the average contribution for access code and subscriber 800 calls would be $0.37 per call. This approach implicitly assumes that all underlying elasticities are equal so that the relative derived demand elasticities estimates are based solely on price. However, given the actual estimates used above, it provides a reasonable approximation to the Ramsey outcome. More important, the calculation demonstrates again that once derived demand elasticities are taken into account, the dial-around and subscriber 800 prices should exceed the local coin rate.

IV. **Prices Set Equal to Average Cost is Not Consistent with Competition and Will Lead to Decreased Consumer Welfare**

36. Utility regulation has often taken the approach of attempting to set service prices equal to an accounting based measure of average cost.[14] Thus, customers in widely varying economic circumstances end up paying the same price, even though their marginal (or incremental costs) vary markedly. However, under competition this pattern of cross-subsidy cannot continue for significant amounts of time. Highly profitable customers are "cherry picked" by competitors which reduces the subsidy to loss making customers. The price to "average customers" has to be raised to continue the subsidy to the loss making customers, and these customers are then ready for "cherry picking". An unstable

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[14] Of course, in the presence of joint and common costs no actual measure of service specific average cost exists which has led to the use of arbitrary accounting based allocations.

equilibrium results with the end result being the collapse of the subsidy system.

A.   The AT&T and MCI Approach of Average Cost is Incorrect

37.   Here some participants (such as AT&T and MCI) have recommended setting price equal to the average cost per call. If the Commission were to follow this approach, it would be inconsistent with competitive outcomes and would lead to consumer harm. As I discussed above, competitors in a competitive industry with significant fixed and common costs use a markup of price above marginal cost. Thus, both demand differences and cost differences are taken into account in setting prices. Here the AT&T approach would disregard demand difference and would use an average cost approach. Consumer harm would result because large numbers of payphones would be removed, with a great increase in consumer inconvenience in not being able to place local coin and long distance calls.

38.   Why would so many payphones be removed? Because no profit making firm will sell at a price below its cost. Selling at a price below cost leads to a loss on every transaction, so the firm will remove all loss making payphones. In a non-competitive payphone situation where competition is absent, these loss making payphones can receive a cross-subsidy, but no-cross subsidy exists in a competitive environment. Thus, the competitive payphone provider will remove the loss making

payphone which will create the consumer harm. The outcome would be inconsistent with the goal of maintaining payphone ubiquity, and the impact would fall disproportionately on higher cost, rural payphones.

B.   If the Commission Adopts a Cost Based Approach, Price Must be Set Equal to the Cost of the Marginal Payphone

39.   If a cost approach is to be used by the Commission (and efficient pricing using demand factors is to be ignored), then the Commission should set prices so that the marginal payphone will still be able to recover its costs. In competitive markets, price is set by the marginal producer, and similar economic principles would apply. Consider the supply of wheat. High yielding plots of land cost more to buy and earn a producers surplus (i.e. rent) while the marginal plot of land just breaks even (no producers surplus).[15] Thus, the price of wheat in a given market equates to the cost of production of the marginal producer. A similar principle would need to be followed here to ensure the existence of payphones in less desirable locations.

40.   If the AT&T approach of setting price equal to average cost were applied to the wheat market, all below average plots of land would no longer be used to grow wheat because farmers would

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[15]   The present discounted value of the producer surplus determines the higher cost of the better yielding plots. As explained in footnote 17, the payphone market would not offer above-normal profits.

lose money on these plots. Since the government could not require wheat growing on these below average plots, the supply of wheat would decrease and consumers would be harmed.[16] The only way to prevent this outcome under the average cost approach is for the government to provide a subsidy. The competitive approach is superior to the average cost approach since no subsidies are needed. While the competitive approach allows more efficient wheat producers to make greater profits,[17] it also allows the marginal producer to recover costs and thus ensures that he continues to produce wheat to the benefit of consumers. In contrast, an average cost approach reduces the number of suppliers and supplies to below competitive levels.

41. This same analysis applies to payphones. If an average cost approach is used, all below average payphones will be removed even though a competitive market would have supported them. Consequently, if the Commission is going to use a cost approach in a competitive environment, it must set prices at a level sufficient to allow cost recovery for the marginal payphone. Any other approach will result in a significant

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[16] The price of wheat would then increase somewhat and more supply would follow, but consumers would still be harmed.

[17] In the case of payphones, because no barriers to entry exist, no firm should earn above normal profits. Instead, the supply of payphones will expand so that only normal profits are available.

reduction in the number of payphones and significant harm to consumers.[18]

C. A Cost Approach Will Lead to Large Administrative Burdens and Will Typically Be Inaccurate

42. If a cost model is used to set prices, it is likely to impose large administrative burdens on PSPs and the Commission. Furthermore, it is likely to diverge substantially from a correct cost based approach as costs and calling volumes change. Note that an average cost approach must take account for both demand elasticities, which I discussed above, and other economic factors which change the location of payphone service demand curves. The regulated prices will require constant revision as these economic factors shift and costs change. Lengthy regulatory proceedings will result, and consumer harm will occur because the supply of payphones will decrease.

43. A simple example will demonstrate the likely consumer harm. Observation of business travelers demonstrates the increased use of mobile telephones to place calls. As the price of long distance calls continues to decrease on mobile telephones due to BOC entry into cellular long distance and due to increased mobile competition from PCS providers, this trend will likely

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[18] Whenever the government through price regulation sets a low price which leads to reduced supply, it harms consumers who would have been willing to pay the higher prices for the good or service. The competitive market leads to these consumers being served and receiving consumer benefits.

continue. If an average price is set for payphones and the trend towards increased use of mobile telephones continues, many payphones which may be marginally profitable today will no longer be profitable within a short time period.[19] Under competition, these payphones will be removed. Before the next regulatory review of prices for payphones would occur in a 3-5 year time frame, consumers would be harmed because of a lack of payphones. On the other hand, a market based approach will adjust for these changes in economic factors by changing prices as demand factors, cost factors, and competitive factors all change.

44. Another problem with the cost based approach advocated by AT&T is that accounting costs do not reflect true economic costs. However, competitive firms make their decision based on the underlying economic costs, and regulation based prices based on accounting costs are likely to lead to significant distortions and consumer harm. The "Hatfield Cost Model" put forward by AT&T and MCI is based on regulation defined costs. It does not appear to treat economic depreciation correctly nor the sunk costs involved in purchase of payphones by a PSP. Thus, if the Commission were to adopt a regulated price approach based on regulation defined accounting costs, decreased supply of payphones will be the likely result with consumer harm the likely economic outcome.

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[19]   I am assuming here that a significant overall outward shift of demand curves for payphone services will not occur.

D. Cost Data Demonstrates that a Significant Decrease in Payphones Will Likely Occur if the Commission Chooses a Per Call Rate Significantly Below $0.35 Per Call

45. I have considered cost data submitted by the RBOCs in this proceeding. I have asked Arthur Andersen to determine the reduction in payphones that is likely to occur under competitive conditions if the FCC chooses a $0.35 per-call compensation rate. Andersen estimates that more than 20 percent of all payphones are at risk, even at the $0.35 rate, and that thousands of additional payphones will be removed for each $0.01 the rate drops below $0.35. Rural areas, with higher costs and a higher proportion of non-local calling, are likely to be hardest hit. This decrease in payphone availability would lead to significant consumer harm.

E. The Cost Based Approach is Inferior to the Competitive Based Approach

46. I have now discussed the competitive based pricing approach to the per-call compensation rate. In its prior decision the Commission chose to link per-call compensation to the competitively established local coin rate. I believe that this approach is superior to a cost based approach because it is more likely to lead to an efficient supply of payphones which will benefit consumers. Other advantages of the competition based approach are: (1) no continuing cost proceedings are needed, (2) rates are self-adjusting to economic changes in demand conditions, cost conditions, and competitive conditions, and (3) the rate accounts for demand, cost, and competitive